Hypnosis and Group Support in Medical Care: Altering Perception and Reality

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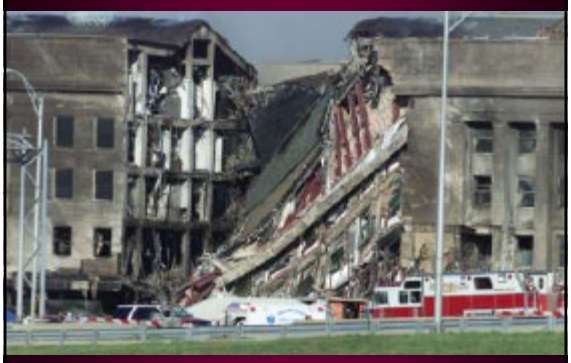
Hypnosis and Group Support in Medical Care: Altering Perception and Reality

Outline

1. Stress, Altered Mental States, and Illness
2. Hypnosis:
   - Effects on the Brain
   - Effects on the Body
3. Cancer
   1. Stress and Depression
   2. Diurnal cortisol and cancer progression
   3. Emotion regulation and diurnal cortisol
   4. Effects of Supportive/Expressive Group therapy on survival time
4. Conclusions: Feeling and Healing

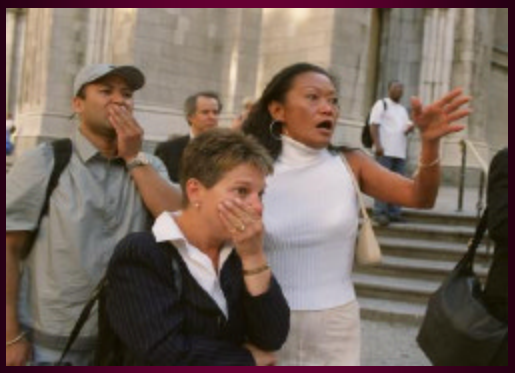
Disease as a stressor

Traumatic Dissociation



Taming Terror

- ***Emotion***
- Cognition
- Social Contact



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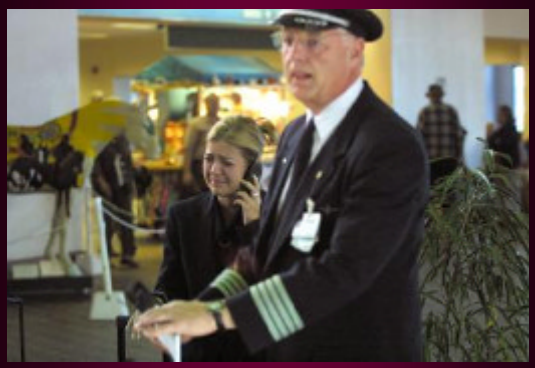


Taming Terror

- Emotion
- Cognition
- ***Social Contact***

Adherence with Medical Treatment

Major obstacles to cancer treatment adherence

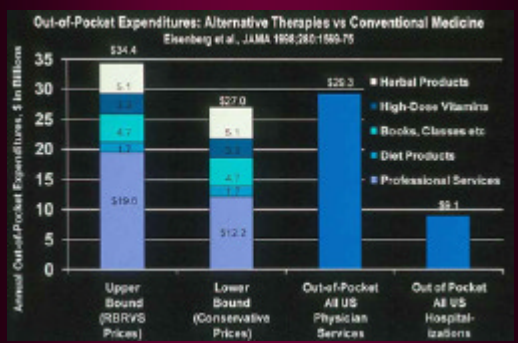
Fear

Uncertainty

Loss of control

Unconventional Medicine

- Popular: 42% of Americans use
  - more visits than to primary care (425M)
  - Pain, self care, weight loss, pediatrics
  - 50% of cancer patients
  - Sophisticated AIDS users
- Concealed - 72% don't talk about it to doctor
- Combined - 83% used conventional treatment



Reasons for Seeking Alternative Therapies

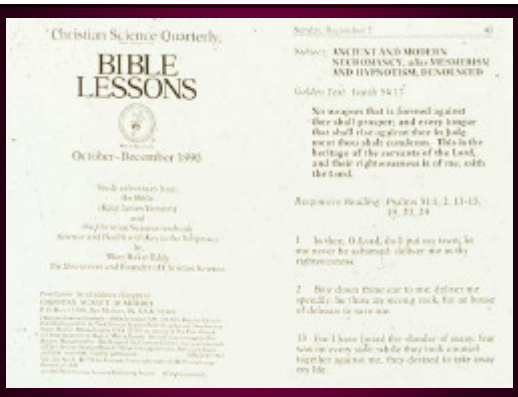
Kaiser Permanente Member Health Survey
10% of enrollees - 1993

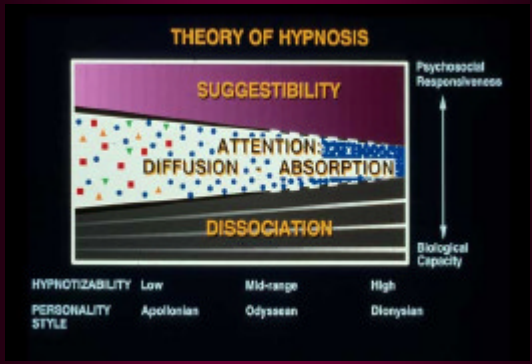
Pain	56%
Stress or Mental Health	22%
Health Promotion	7%
URI'S	5%
Allergies	2%
GI Problems	2%
Hypertension	1%

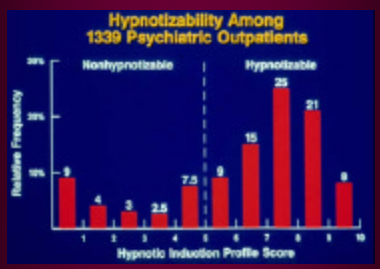
Why Patients Use Integrative Medicine

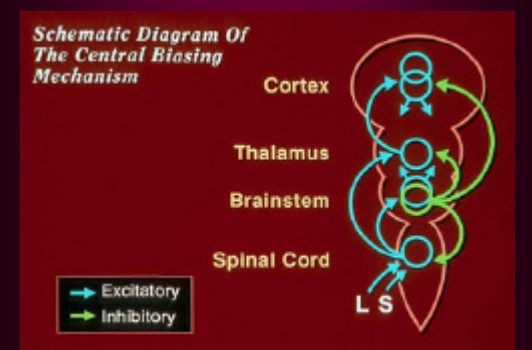
- Value whole person emphasis
  - Stress and distress management
- Active participation in treatment
- Orthodox medicine
  - Didn't work
  - Adverse effects
  - Poor doctor-patient communication
- Pain and other chronic symptoms

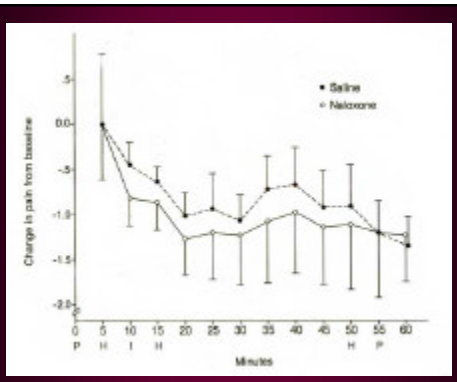
Vincent, C. 1996 "Why do patients turn to complementary medicine? An empirical study. *British Journal of Clinical Psychology* 35:37-48



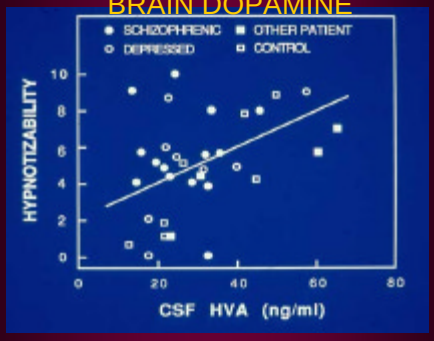






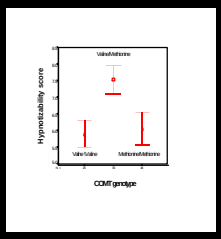


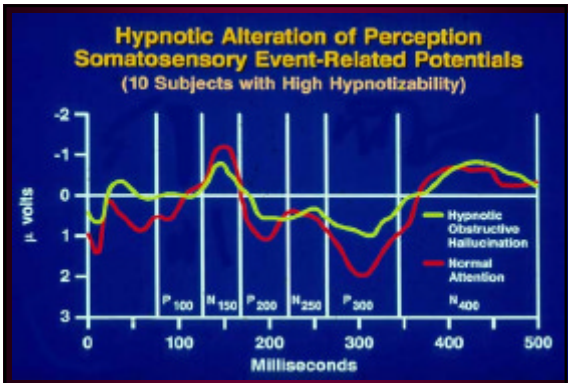
HYPNOTIZABILITY AND BRAIN DOPAMINE

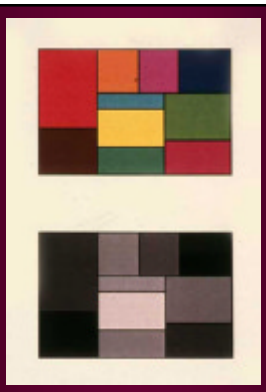


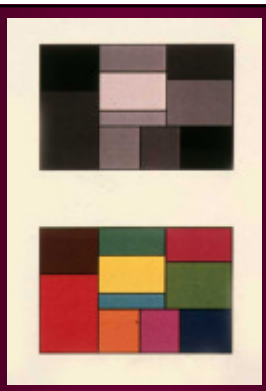
Polymorphism in COMT gene is related to high hypnotizability

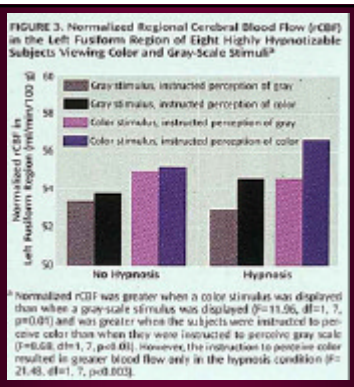
Raz, Posner et al., in press, 2003

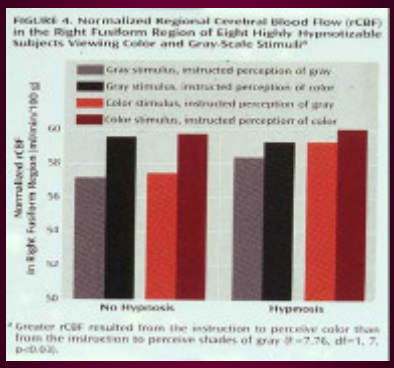


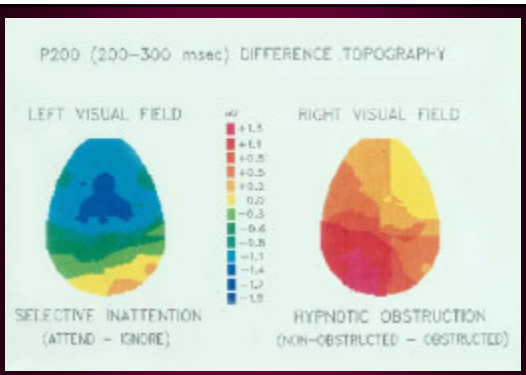




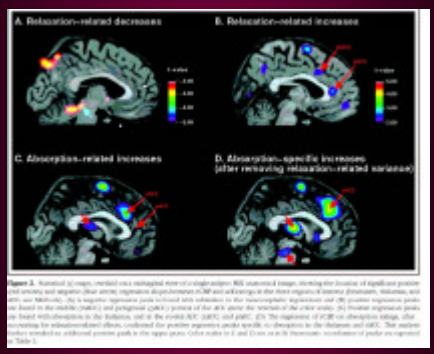








Hypnosis and the Anterior Cingulate



Hypnosis: Somatosensory and Anterior Cingulate

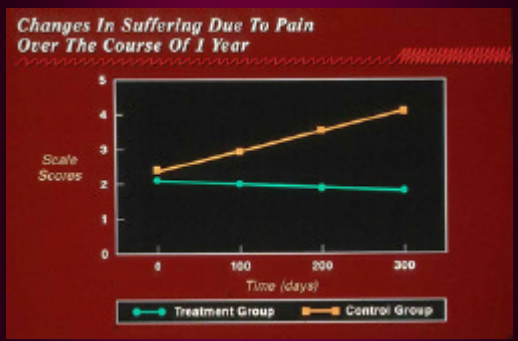
Hypnotic Techniques

- Anxiolysis:

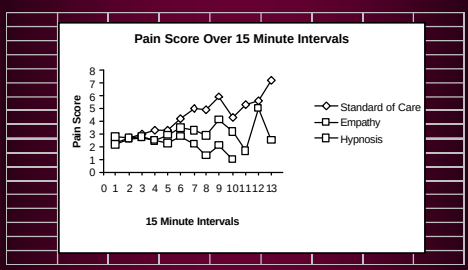
1. Relaxation: "Float"
2. Dissocation: "Where would you rather be?"

- Sensory Alteration:

1. Warmth or Coolness
2. Tingling
3. Distraction



Adjunct Nonpharmacologic Analgesia (Lang et al., *Lancet* 2000; 355:1486-90)



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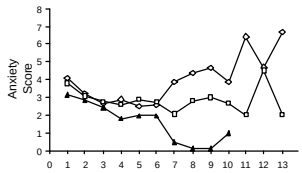

Adjunct Nonpharmacologic Analgesia (Lang et al., *Lancet* 2000; 355:1486-90)

Table 3. ADVERSE EVENTS

EVENT	STANDARD GROUP (N=79)	ATTENTION GROUP (N=80)	RELAXATION GROUP (N=82)	Fisher Exact Test S > A	Fisher Exact Test S > R	Fisher Exact Test A > R
Oxygen desaturation						
At least one occurrence	21	4	8	0.0001*	0.0047	0.1968
Oxygen tubing placed	17	5	6	0.0047	0.0088	0.5172
Prolonged hypoxemia	6	2	1			
Hemodynamic instability						
During procedure	11	9	1	0.3941	0.0019*	0.0080
In recovery	1	1	0			
Bleeding from puncture site	3	3	1			
Mental Status Changes	4	0	1			
Vomiting	2	1	1			

* $p < 0.05/24 = 0.0021$

Adjunct Nonpharmacologic Analgesia (Lang et al., *Lancet* 2000; 355:1486-90)

Table 2. PROCEDURE TIME AND DRUG USE

VARIABLE	STANDARD GROUP (N=79)	ATTENTION GROUP (N=80)	RELAXATION GROUP (N=82)	ANALYSIS OF VARIANCE *p* VALUE	SIGNIFICANT DIFFERENCES FROM SUPPLEMENTAL TESTS
Average Procedure Duration in Minutes	78	67	61	0.0019	S > R
Average Drug Units Requested	1.8	0.8	0.9	0.0001	S > E, S > R
Average Drug Units Received	1.9	0.8	0.9	0.0000	S > E, S > R

S=Standard Group A=Attention Group R=Relaxation Group

Evaluation of Hypnotic Relaxation during VCUG in Children: Preliminary Findings

David Spiegel, M.D., Lisa D. Butler, Ph.D., Barbara K. Symons, B.S. & Linda D. Shortliffe, M.D.
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This research was supported by:
The Child Health Research Fund (Lucile Packard Children's Hospital)
The Innovations in Patient Care Program
(Lucile Packard Children's Hospital / Stanford University Medical Center)

Sample Characteristics

Sample: 23 children undergoing a VCUG

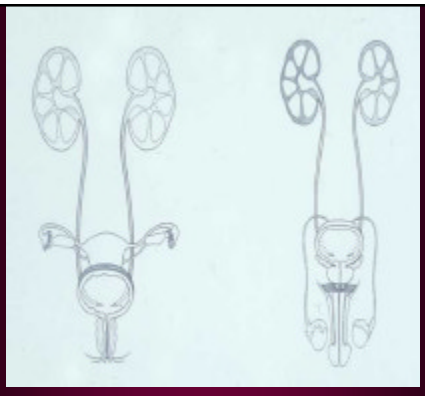
Age: Mean = 7.5 years (SD = 2.5; range = 4-14)

Gender: 74% female; 26% male

Ethnicity:
1 (4%) African-American
3 (13%) Asian-American
17 (74%) Caucasian
1 (4%) Hispanic/Latina
1 (4%) Other

Previous VCUGs: Mean = 2.7 (SD = 1.6; range = 1-6)

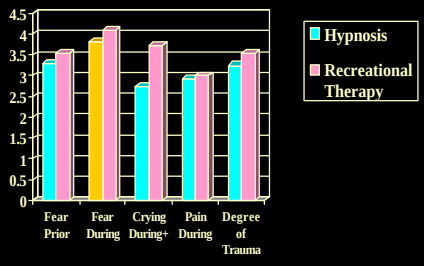
Condition: 12 hypnosis; 11 recreational therapy



VCUG Procedure

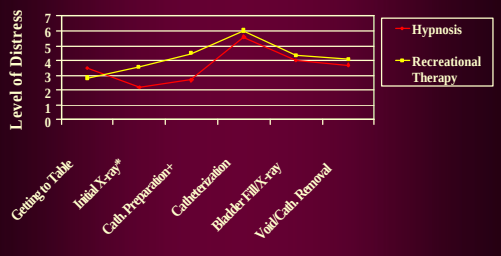
- Child disrobes and lies on examination table
- Initial x-rays are taken
- Genital area is cleaned
- Catheterization is conducted
- Bladder is filled with contrast fluid
- X-rays are taken
- Child voids on table as more x-rays are taken.

Parents' Reports
Hypnosis versus Recreational Therapy



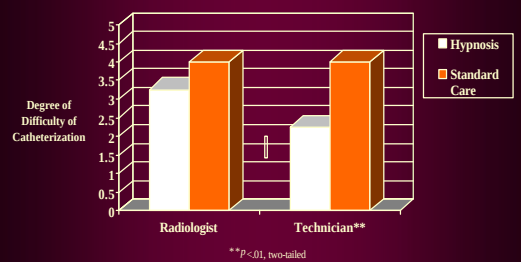
+P = .07

Highest Distress During Procedure
Hypnosis versus Recreational Therapy



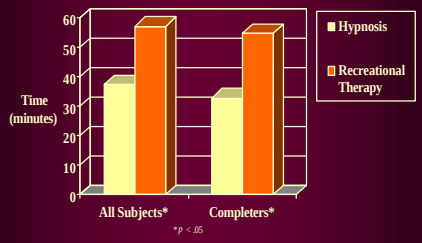
+p < .10; *p < .05

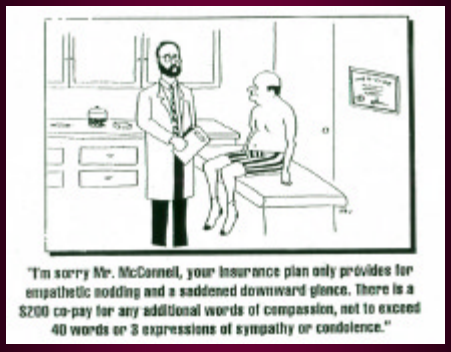
Professionals' Reports
Hypnosis versus Standard Care



**P<.01, two-tailed

Total Time for VCUG Procedure
Hypnosis versus Recreational Therapy





Healing and Feeling: Emotional Expression and Cancer

David Spiegel, M.D.
Janine Giese-Davis, Ph.D.
Sandie Sephton, Ph.D.
Lisa Butler, Ph.D.
Heather Abercrombie, Ph.D.
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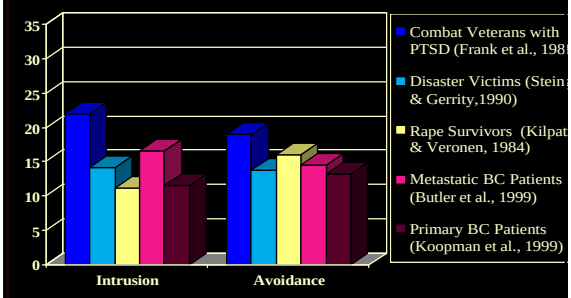
Mean Levels of Symptoms in Various Traumatized Populations



Depression and Medical Illness

Population	**% Depressed**
General	3%
Outpatients	6%
Inpatients	12%
Terminally Ill	20%
Request Assisted Suicide	60%

Studies Linking Cancer and Depression - 1

Authors And Year	Sample	N	Design	Measure of Depression	Length of Follow-up	Result: Cancer Incidence or Progression	Result: Cancer Mortality
Shekelle et al. 1981	Random sample of 5,397 men Western Electric employees	2,020	prospective	MMPI	17 years		2.3 fold increase in odds of cancer death (p<.001)
Everson et al. 1996	Men from Kuopio (Finland) Ischemic Heart Disease Study	2,428	Prospective	Hope-lessness Scale	6 years	RH = 1.80 95% CI 1.11, 2.92	Moderate RH = 2.25 95% CI 1.10, 4.58 High RH = 2.61 95% CI 1.03, 6.64
Penninx et al. 1998	Elderly cohort	4,825	Prospective	CES-D, depressed x3	3.8 years	RR = 1.88, 95% CI 1.13 - 3.14	
Herrman n et al. 1998	Consecutive Medical Admissions (Heme/Onc N = 96)	454	Prospective	HAD	22 months		Depression predicted mortality OR = 3.2, 95% CI 1.9 - 5.5
Felitti et al. 1998	Adverse Childhood Experiences (ACE)	9,508 HMO patients	Retrospective	NIMH Diagnostic Interview Schedule		Elevated risk of depression and cancer related to severity of ACE	

Studies Linking Cancer and Depression - 2

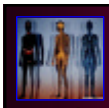
Loberiza et al. 2002	Hemato-poetic stem cell transplant recipients	193	Prospective	SF-36, "depressive syndrome	1 year		RR = 3 95% CI 1.07, 8.30
Stommel et al. 2002	Cancer patients	871	Prospective	CES-D	19 months		New depressive sx HR = 1.66, 95% CI 1.16-2.37 Prior emotional problems HR = 2.04, 95%CI 1.14-2.65
Dalton et al. 2002	All adults in Denmark psychiatrically hospitalized with depression	89,491	Retro-spective	Hospital diagnosis	1969-1993	RR 1.05, 95% CI 1.03, 1.07; Non tobacco-related cancers RR = 1.0, 95% CI .97, 1.03	
Tijhuis et al. 2002	Elderly men	939	Prospective	CECS	9 years	Intermediate control of depression RR = 1.7, 95% CI 1.0-2.8	Intermediate and high control of depression RR = 2.1, 95% CI 1.0-4.3

Depression & Cancer Incidence

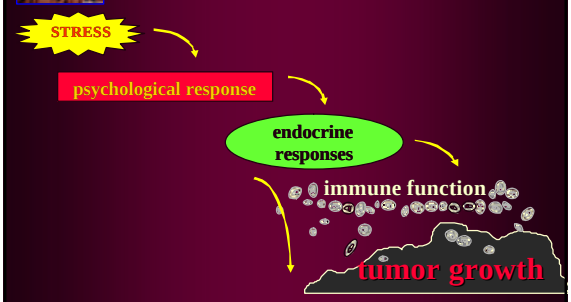
- In a prospective cohort study with a mean follow-up of 3.8 years that included 4825 persons (1708 men and 3117 women) aged 71 years and older, the hazard ratio for cancer associated with chronically depressed mood was 1.88 (95% confidence interval = 1.13-3.14).
- *Penninx BW, Guralnik JM, Pahor M, et al. JNCI 1998; 90:1888-93*
-

Studies Showing No link between Depression and Cancer Incidence, Progression and Mortality

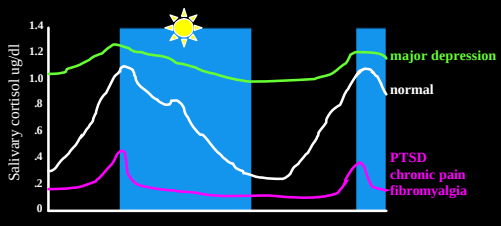
Author & Year	Sample	N	Type of Study	Depression Measure	Follow-up	Effect on Cancer Incidence or Progression	Effect on Mortality
Kaplan & Reynolds 1988	Population sample	6,848 men & women	prospective	HPL (Human Population Laboratory Questionnaire	17 years	No difference depressed vs. non depressed	No difference depressed vs. nondepressed
Zonderman et al. 1989	National Health and Nutrition Represen-tative Sample	6,913	Prospective	CES-D	10 years	No prediction of cancer incidence RR=1.1, 95%CI0.9-1.4	No prediction of cancer mortality RR=1.2, 95%CI0.8-1.8
Bleiker et al. 1996	Residents of Nijmegen (Netherlands) 43 or older	9,705	Case-control	Self-Assessment Questionnaire – Nijmegen	1989-1994	Depression not related Anti-Emotionality OR 1.16 (95% CI 1.05-1.35)	
Tross et al. 1996	Women with Stage II breast cancer	280	Prospective	SCL-90-R	15 years	Distress did not predict relapse RR = 1.01, 95% CI 0.622-1.66	Distress did not predict mortality RR = 1.03, 95% CI 0.58-1.82
Teno et al. 2000	Hospitalized Medical Patients (321 – 25% [illegible])	1,266	Prospective	POMS	2 years		Depression did not add to prediction of mortality



Biological Pathways

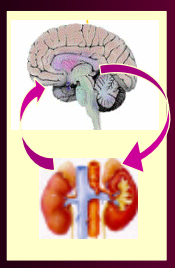


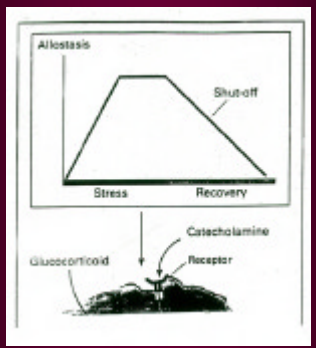
Altered Circadian Cortisol Rhythms in Depression and PTSD



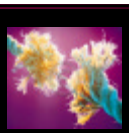
Yehuda, R., M. H. Teicher, et al. (1996). "Cortisol regulation in posttraumatic stress disorder and major depression: a chronobiological analysis." Biol Psychiatry. **40**(2): 79-88.
Rosmond, R., M. Dallman, et al. (1998). "Stress-related cortisol secretion in men: Relationships with abdominal obesity and endocrine, metabolic and hemodynamic abnormalities." J Clin Endocrinol Metab **83**(6): 1853-1859.
Chrousos, G. and P. Gold (1998). "Editorial: A healthy body in a healthy mind--and vice versa--The damaging power of uncontrollable stress." J Clin Endocrinol Metab **83**(6): 1842-1845.

Chronic stress



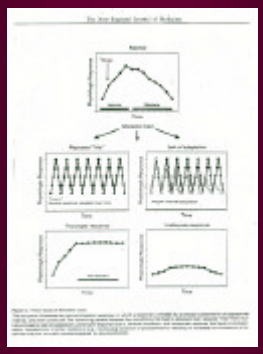


Allostatic Load



The cumulative effect of stressors on physiological response systems: Repeated stress-response activation has been associated with HPA axis dysregulation and adverse health consequences.

McEwen, B. S. (1998). "Protective and damaging effects of stress mediators: allostasis and allostatic load." *The New England Journal of Medicine* **338**(3): 171-179.



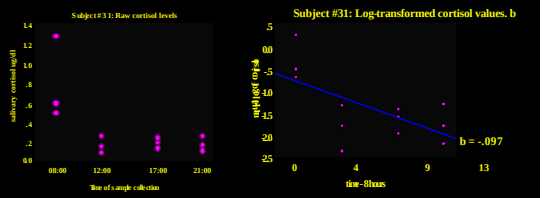
SUBJECTS (n = 104)

	mean years	(SD)
Age at Randomization	53.2	(10.7)
Education	15.8	(2.4)
Disease Free Interval	3.9	(2.9)
Time from Recurrence to Randomization	2.1	(3.3)

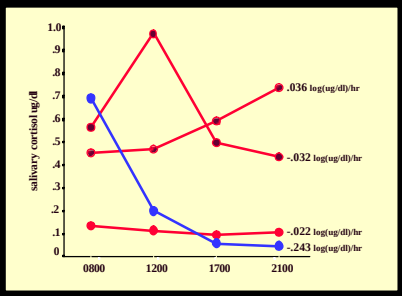
Calculation of the diurnal cortisol slope

1. Cortisol samples were collected at 4 times of day over a three day period

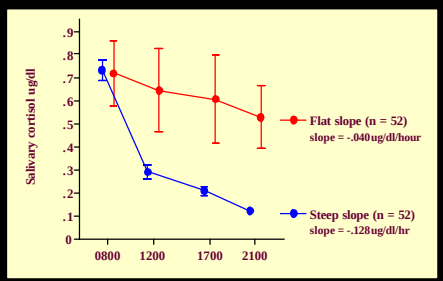
2. Raw values were log transformed, and the slope of the regression of cortisol on sample collection time was calculated.



Types of aberrations observed

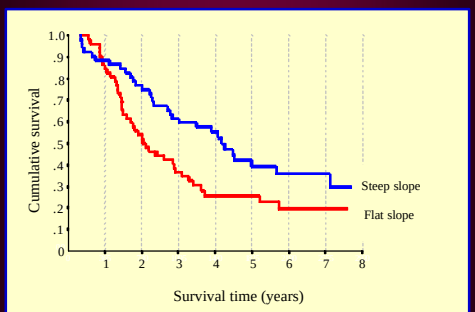


Mean (and bars show 2 x S.E.M.) diurnal salivary cortisol levels at four times of day for two equal groups of patients split by cortisol slope.



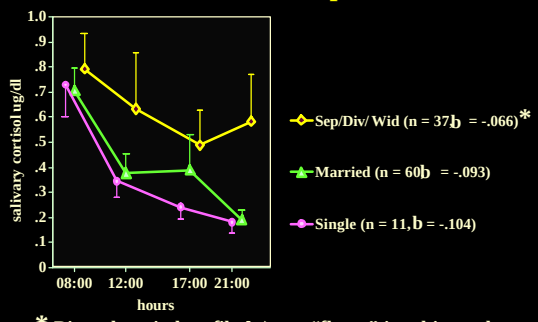
Sephton et al., Journal of the National Cancer Institute 92:994-1000, 2000

Metastatic breast cancer patients with relatively flat cortisol slopes had shorter subsequent survival times (Cox Proportional Hazards p < .005).



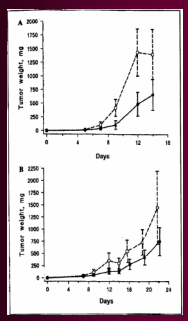
Sephton et al., Journal of the National Cancer Institute 92:994-1000, 2000

Marital Disruption



* Diurnal cortisol profile (b) was "flatter" in subjects who had experienced marital disruption: F = 3.35, p < .04.

SCN Ablation Produces More Rapid Tumor Growth



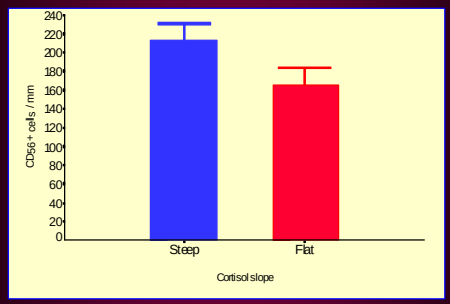
O *SCN lesioned*

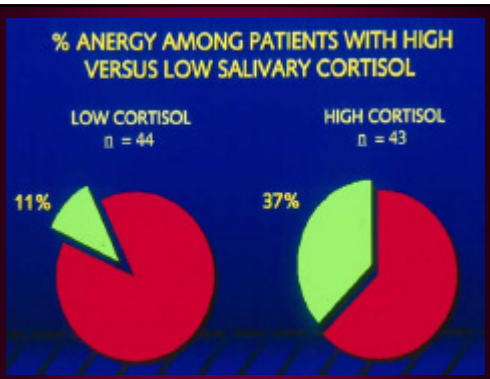
- *Sham operated*

Osteosarcoma

Pancreatic adenocarcinoma

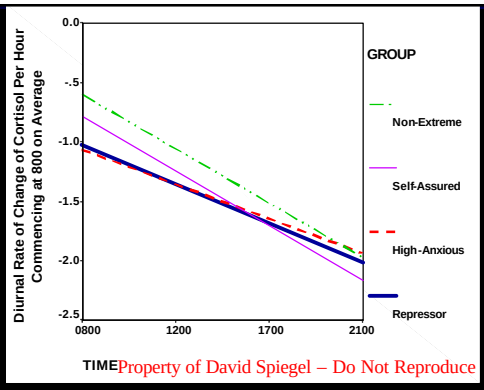
Patients with relatively flat cortisol slopes had fewer NK cells (p < .01).





Breast Cancer, Cortisol, and Emotion

- **Disrupted circadian cortisol rhythm is associated with:**
  1. **Repression**
  2. **High Anxiety**
  3. **Less sustained primary negative affect in groups**
  4. **Less sustained positive affect in groups**



Giese-Davis, J., Sephton, S. E., Abercrombie, H., Duran, R. E. F., & Spiegel, D. (In Revision). Repression is Associated with Aberrant Diurnal Cortisol Rhythm in Women with Metastatic Breast Cancer. *Health Psychology*.

Change In Emotion Regulation Strategy For Women with Metastatic Breast Cancer Following Supportive-Expressive Group Therapy

Giese-Davis, Koopman, Butler, Classen, Cordova, Fobair, Benson, & Spiegel

Giese-Davis, J., Koopman, C., Butler, L. D., Classen, C., Cordova, M., Fobair, P., Benson, J., & Spiegel, D. (2002). Change in emotion regulation strategy for women with metastatic breast cancer following supportive-expressive group therapy. *Journal of Consulting and Clinical Psychology, 70* (4), 916-925.

Measures

Dual coded *kappa* >.6

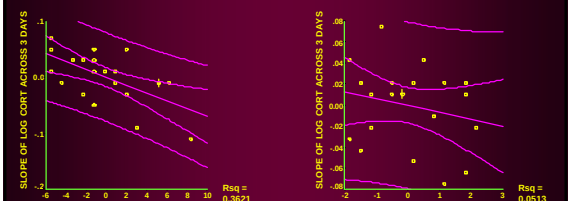
	Duration of a Moment of Affective Expression Mean Sec.	Range
Primary Negative Affect		
Direct Anger	0.68	.00 -- 16.08
High Sadness	2.28	.00 -- 16.97
Low Sadness	2.53	.00 -- 12.93
High Level Fear	0.24	.00 -- 1.53
Verbalized Fear	1.40	.00 -- 6.37
Positive Affect		
Affection	2.55	.00 7.54
Validation	2.80	.00 6.26
Interest	2.08	.00 6.30
Genuine Humor	2.04	.00 10.73
Excitement/Surprise	0.37	.00 2.90

Demographics

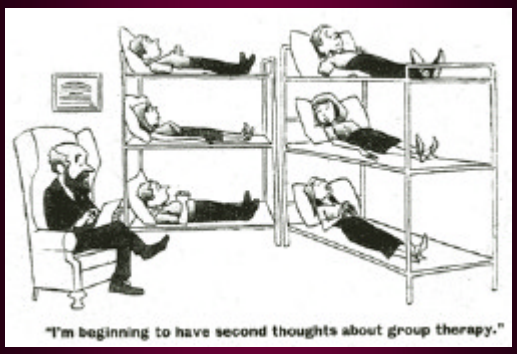
	Control (N=45)	Treatment (N=20 of 58)
Age at randomization	53.5	53.7
Years of education	16.0	16.2
Married	53%	52.4%
Ethnicity		
White	80%	95.2%
Household Income <60K	56%	61.9%

All women taking steroids or the chemotherapy agent megase were selected out of this analysis. This resulted in a loss of 8 subjects

Partial Regressions: Cortisol Slope & Primary Negative and Positive Affect



"Give sorrow words:
The grief that does not speak whispers the o'er-fraught heart, and bids it break".
Shakespeare, Macbeth



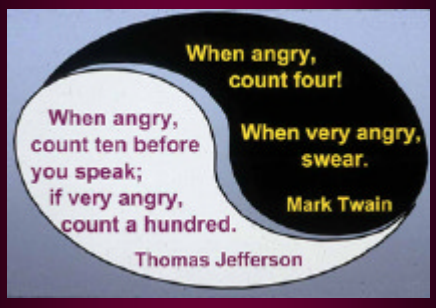
Supportive/Expressive Group Psychotherapy: Themes

1. Building Bonds
2. Expressing Emotion
3. Detoxifying Dying
4. Reordering Life Priorities
5. Fortifying Families
6. Clarifying Communication with Doctors
7. Symptom Management

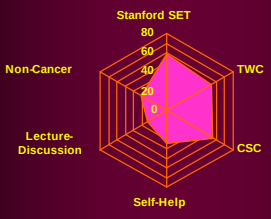
Supportive/Expressive Group Therapy

Expressing Emotion

- Facing feelings directly
- Restructuring feelings in a supportive social context
- Emotion as a source of closeness rather than isolation



Expressing True Feelings



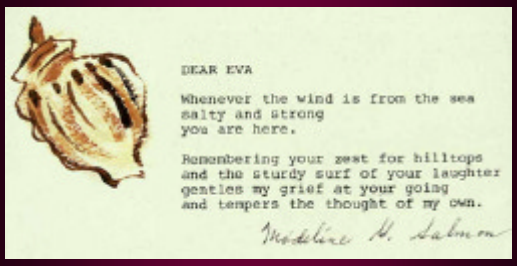
Supportive/Expressive Group Therapy

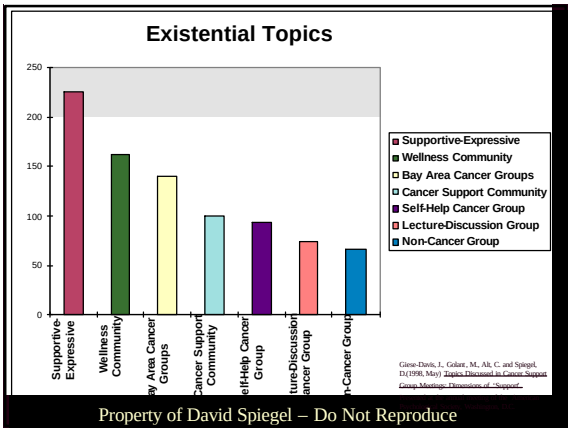
Detoxifying Dying

Restructure one overwhelming fear into a series of problems

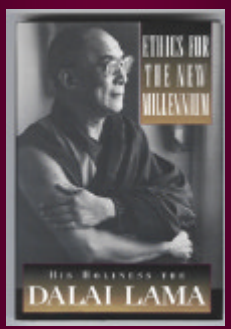
- Process of dying
- Separation from loved ones
- Loss of control
- Pain

Develop active coping strategies





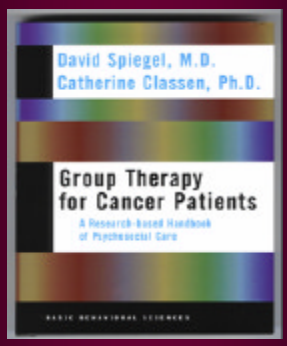
"What I found is at the beginning in the group is a bit like that fear you have standing at the top of a tall building or at the edge of the Grand Canyon. At first you are afraid to even look down (I don't like heights), but gradually you learn to do it and you can see that falling down would be a disaster. Nonetheless you feel better about yourself because you're able to look. That is how I feel about death in the group – I am able to look at it now. I can't say I feel serene, but I can look at it." *Emily*



Supportive/Expressive Group Therapy

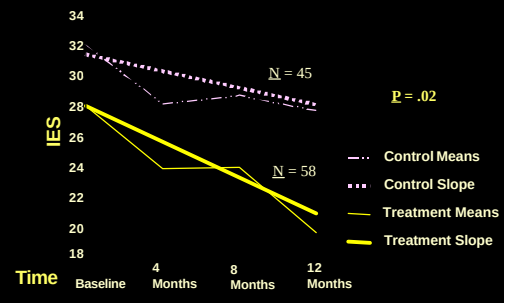
Taking time

- Facing the limitations of time
- Developing a life project
- Orpheus exercise



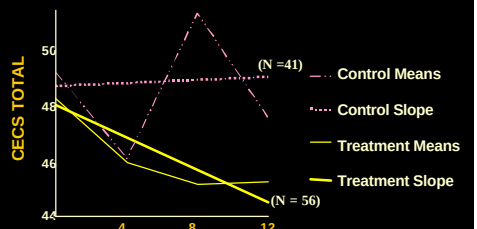
Effect of Group Therapy for Metastatic Breast Cancer on IES Total Score Over One Year

Classen C, Butler LD, Koopman C, et al. Archives of General Psychiatry 2001; 58:494-501



Effect of Group Therapy for Metastatic Breast Cancer on CECS Total Score

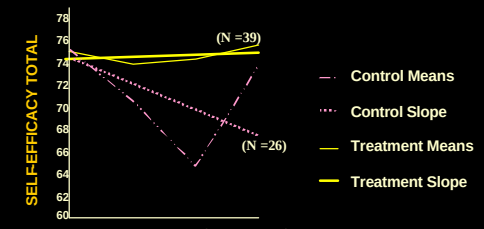
F (1, 96) = 5.00, p = .01



N for Means	Baseline	4 Month	8 Month	12 Month
Control	41	36	32	30
Treatment	56	52	45	44

Effect of Group Therapy for Metastatic Breast Cancer on Emotional Self-Efficacy Total Score

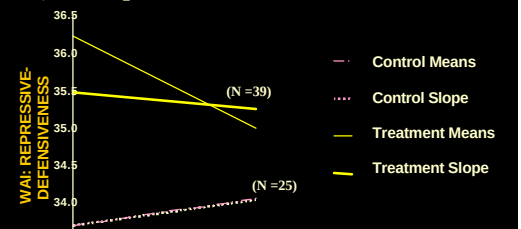
F (1, 64) = 2.64, p = .055



N for Means	Baseline	4 Month	8 Month	12 Month
Control	26	24	17	19
Treatment	39	35	32	32

Effect of Group Therapy for Metastatic Breast Cancer on WAI Repressive-Defensiveness

F (1, 63) = .19, p = .33

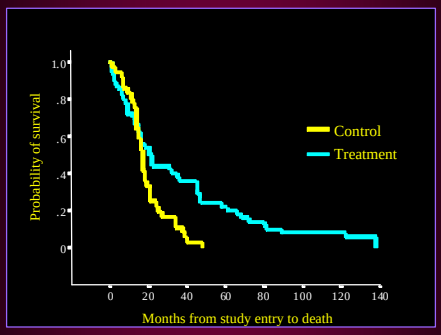


N for Means	Baseline	12 Month
Control	25	25
Treatment	39	39

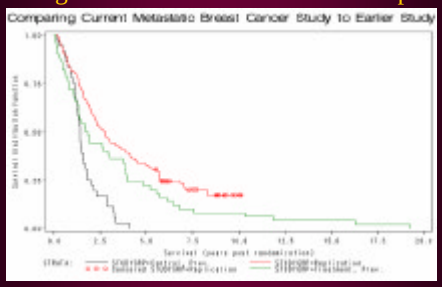
Changes in Emotion Regulation Mediate Distress Reduction

- Reducing Suppression ➡ Reduced Trauma Symptoms
- Increasing Restraint of Hostility ➡ Reduced Mood Disturbance
- Being assigned to Treatment ➡ Moderated the Effect of Emotional Self-Efficacy on Both Trauma Symptoms and Mood Disturbance

Spiegel et al., *The Lancet,* October 14, 1989



Overall Survival in Current Study vs. Original Treatment and Control Groups

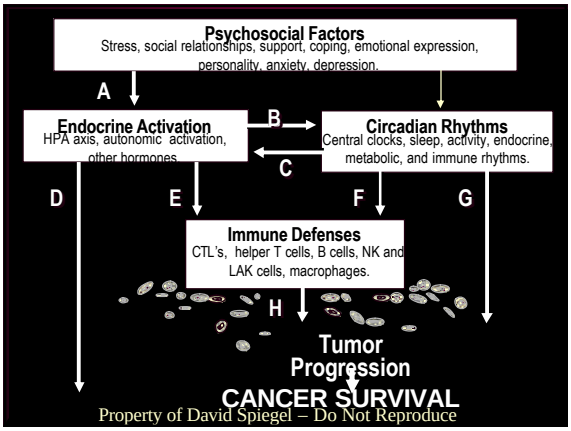


Randomized Trials Showing Survival Benefit

Study	Cancer	N	Psychological Outcome
Spiegel et al 1989	Metastatic Breast	86	Less distress, pain
Richardson et al, 1990	Lymphoma, leukemia	94	Better treatment adherence
Fawzy et al, 1993	Melanoma	66	Less distress, Better coping
Kuchler et al, 1999	GI cancers	271	Better stress management
McCorkle et al 2000	Solid Tumors	375	Less distress

Randomized Trials Showing *No* Survival Benefit

Study	Cancer	N	Psychological Outcome
Linn et al. 1982	Lung, GI	120	Less depression, more self esteem, life satisfaction
Ilnyckyj et al, 1994	Breast	127	No benefit
Cunningham et al, 1998	Metastatic Breast	66	No benefit
Edelman et al, 1999	Metastatic Breast	121	No long-term benefit
Goodwin et al, 2001	Metastatic Breast	235	Less distress, depression



Conclusions

1. Mind Matters:
   - Stress and Hypnosis are altered mental states that can affect brain and body function for good or ill
2. Hypnosis alters brain processing of pain and anxiety, leading to better medical outcome
3. Cancer:
   - Depression and Cancer are a bad combination
   - Diurnal cortisol dysregulation predicts cancer progression
   - Supportive/Expressive Group therapy improves emotion regulation, reduces distress, and may affect survival time
4. Feeling may lead to healing

This Work Was Supported By:

- NIMH
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- Charles A. Dana Foundation
- Nathan S. Cummings Foundation
- Fetzer Institute

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- David Spiegel, M.D., Medical Director

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- Hypnosis
- Massage
- Meditation
- Group Therapy
- Cancer Supportive Care
- Nutritional Counseling
- Naturopathy

Shakespeare on Commiserating

"When we our betters see bearing our woes,

We scarcely think our miseries our foes

…the mind much sufferance doth overskip

When grief hath mates and bearing fellowship"

Edgar, King Lear